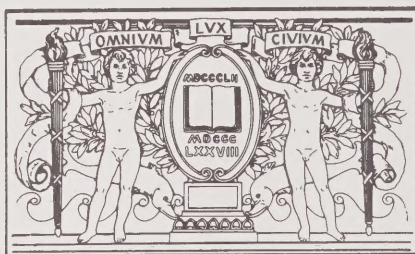


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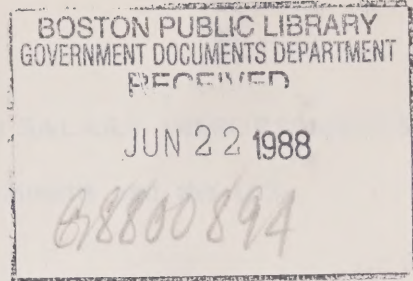
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AVERAGE WAGES AND TOTAL WAGE AND SALARY DISBURSEMENTS:

**Comparison of Suffolk County with Massachusetts and the U.S.
1969-1986**

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April, 1988

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AVERAGE WAGES AND TOTAL WAGE AND SALARY DISBURSEMENTS:

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Introduction

This report presents the latest data from the U.S. Department of Commerce's Bureau of Economic Analysis on average wages and the total wage bill for Massachusetts counties and the U.S. as a whole, for the 1969-1986 period.¹ Major trends are highlighted by comparing Suffolk County, other Massachusetts counties, and the United States. The wages and disbursements discussed are by place of work.

Summary

For those working in Suffolk county, 96 percent of whom work in Boston, the annual average wage exceeded those in the rest of Massachusetts and the U.S. for each year between 1969 and 1986.

Within Massachusetts the highest wage areas have consistently been within the confines of the 5-county Boston metropolitan region during the 1969-86 period. During the decade of 1976-86, high wage jobs have "spread" north to Essex county (Lawrence-Haverhill) and northwest to Middlesex county (Lowell).

The average wage has been consistently higher in Suffolk County than the average wage of U.S. metropolitan areas during the period, 1969-86. Since 1980 Suffolk County's

¹ Throughout this paper wages and wage and salary are used interchangeably.

average wage has grown at a rate faster than that of the U.S. wage to become significantly higher than the national average wage.

Suffolk County's share of total U.S. disbursements of wages and salaries declined through 1978, but has increased steadily since 1981.

Massachusetts' Counties Average Wages

Suffolk county employees 96 percent of whom work in Boston have had consistently higher average wages than all other counties in Massachusetts during the 1969-1986 period. See Table 1. The Figure 1 map of Massachusetts counties showing the spatial distribution of relative average wage levels in 1986, indicates that Suffolk county along with Middlesex county were the highest wage areas in the state by place of work.

A comparison of the 1976 average wages map in Figure 2 to the 1986 map in Figure 1 shows that during the 1976-1986 decade there was a "spread" of higher wage jobs into north suburban and northwest suburban Boston, that is, Essex and Middlesex counties respectively. The other counties in Massachusetts have essentially maintained their relative wage level ranking.

Average Wages In Boston Metro, Massachusetts And The U.S.

The Suffolk county average wage in 1986 was \$20,354 (in 1982 dollars), compared to the \$17,662 (in 1982 dollars) average for U.S. metropolitan areas. Through the 1969-1986 period the Suffolk County average has been consistently higher than the average wages for the Boston New England Consolodated Metropolitan Area (Boston NECMA), for

Table 1: Average Wages in Massachusetts Counties, 1969, 1976,
1980, 1986 (in constant 1982 dollars)

<u>COUNTY</u>	<u>1969</u>	<u>1976</u>	<u>1980</u>	<u>1986</u>
BARNSTABLE	11,504	12,237	11,988	13,504
BERKSHIRE	13,998	14,751	14,523	15,571
BRISTOL	12,349	12,988	12,877	14,026
DUKES	10,333	10,903	11,029	12,360
ESSEX	13,557	14,588	14,823	16,721
FRANKLIN	12,164	12,995	12,973	13,835
HAMPDEN	13,752	14,647	14,636	15,534
HAMPSHIRE	12,621	13,201	12,480	13,523
MIDDLESEX	15,287	16,501	16,686	19,425
NANTUCKET	11,068	11,826	12,046	14,817
NORFOLK	14,147	15,469	15,749	17,824
PLYMOUTH	12,410	13,518	13,259	14,591
SUFFOLK	15,634	17,707	17,859	20,354
WORCESTER	13,682	14,550	14,523	15,757
US AVERAGE	14,224	15,751	16,235	16,892

Source: U.S. Department of Commerce. Bureau of Economic
Analysis. Regional Economic Measurement Division.
"Average Wage, Wage and Salary Employment, and
Total Disbursement Database." December 1987,
unpublished. Adapted by the Policy Development
and Research Department, Boston Redevelopment
Authority.

FIGURE 1 RELATIVE WAGES IN MASSACHUSETTS COUNTIES, 1986
(U.S. average wage = 1)

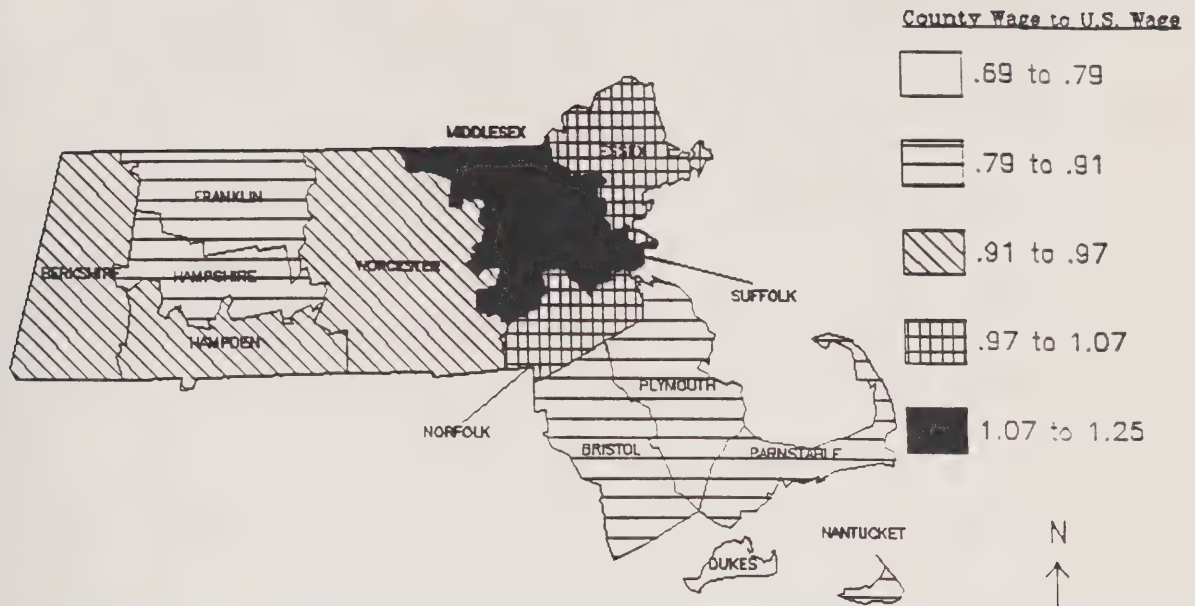
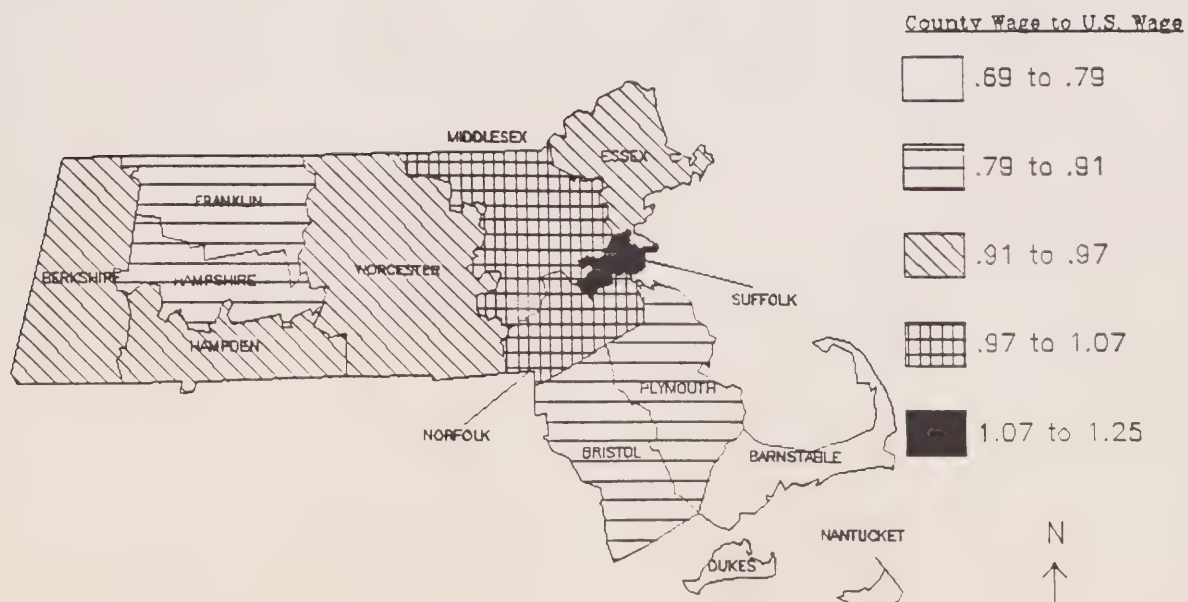


FIGURE 2 RELATIVE WAGES IN MASSACHUSETTS COUNTIES, 1976
(U.S. average wage = 1)



Mass., and the average for all U.S. metropolitan areas in the 1969-1986 period. See Table 2 and Figure 3.

Table 3 divides the 1969-1986 period into four in order to depict the annual growth rate trends. With the exception of the 1976-80 period, the Suffolk County growth rates have been higher than the U.S. Metro Average. Figure 4 highlights Suffolk County and U.S. Metro average wage growth rates for each of the four comparative periods. The 1.8 percent growth rate of the average wage for Suffolk County during 1969-76 compared to a 1.4 percent rate for U.S. metro areas. Corresponding growth rates for 1976-80 were 0.2 percent in Suffolk and 0.7 percent in U.S. metro areas; for 1980-83, 1.6 percent and 0.4 percent respectively; and finally for 1983-86, 2.8 percent and 1.0 percent. The Suffolk County growth rates indicate that wages are not only rising steadily, but rising at an accelerating pace.

For ease of comparison between Suffolk County, Massachusetts, and the U.S. Metropolitan areas, it is helpful to compute an index which uses the national average wage for all metropolitan areas as a base figure. The index provides an additional measure of Suffolk County's performance relative to that of other regions. Both Table 4 and Figure 5 show that the gap between Suffolk and U.S. metropolitan average wage levels narrowed during 1972-1981, but since then has expanded. In 1972, Suffolk wages were 9 percent higher than U.S. metropolitan wages, by 1981 they were only 5 percent higher. However, between 1981 and 1986, Suffolk wages rose to 15 percent above the national average.

Table 2. Average Wage Comparison of Suffolk, Boston Metro with the Rest of
Massachusetts and U.S., 1969-1986
(in Constant 1982 Dollars)

Year	Suffolk County	Boston NECMA ¹	Mass. Metro	Mass. Non-Metro	Mass. Total	U.S. Metro	U.S. Non-Metro	U.S. Total
1969	15,634	14,882	14,428	11,678	14,357	14,954	11,031	14,224
1970	16,462	15,496	14,943	12,091	14,871	15,369	11,343	14,614
1971	17,168	16,049	15,408	12,365	15,328	15,766	11,658	14,990
1972	17,742	16,549	15,887	12,877	15,805	16,302	12,070	15,501
1973	17,864	16,601	15,942	12,798	15,855	16,392	12,245	15,605
1974	17,593	16,290	15,642	12,626	15,558	16,301	12,316	15,540
1975	17,518	16,091	15,439	12,265	15,346	16,160	12,382	15,437
1976	17,707	16,287	15,637	12,376	15,541	16,465	12,793	15,751
1977	18,012	16,484	15,819	12,599	15,721	16,732	13,037	16,016
1978	17,928	16,480	15,834	12,633	15,736	16,906	13,287	16,210
1979	17,845	16,392	15,750	12,412	15,647	16,907	13,400	16,237
1980	17,859	16,440	15,738	12,206	15,628	16,906	13,354	16,235
1981	17,799	16,491	15,760	12,148	15,646	16,896	13,404	16,241
1982	18,292	16,829	16,040	12,185	15,916	16,972	13,324	16,293
1983	18,718	17,229	16,367	12,284	16,233	17,125	13,292	16,417
1984	19,023	17,553	16,693	12,566	16,556	17,246	13,343	16,534
1985	19,634	18,097	17,157	12,910	17,013	17,422	13,304	16,683
1986	20,354	18,770	17,755	13,568	17,610	17,662	13,324	16,892

Source: U.S. Department of Commerce. Bureau of Economic Analysis. Regional Economic Measurement Division. "Average Wage, Wage and Salary Employment, and Total Disbursement Database." December 1987, unpublished. Adapted by the Policy Development and Research Department, Boston Redevelopment Authority.

Footnote: 1 NECMA = New England Consolidated Metropolitan Area - (Norfolk, Suffolk, Middlesex, Essex, and Plymouth Counties)

Table 3. Annual Growth Rate of Average Wage in Suffolk, Boston Metro and the
Rest of Massachusetts and U.S., 1969-1986
(in percent)

Year	Suffolk County	Boston NECMA	Mass. Metro	Mass. Non-Metro	Mass. Total	U.S. Metro	U.S. Non-Metro	U.S. Total
1969-86	1.6	1.4	1.2	0.9	1.2	1.0	1.1	1.0
1969-76	1.8	1.3	1.2	0.8	1.1	1.4	2.1	1.5
1976-80	0.2	0.2	0.2	-0.3	0.1	0.7	1.1	0.8
1980-83	1.6	1.6	1.3	0.2	1.3	0.4	-0.2	0.4
1983-86	2.8	2.9	2.8	3.4	2.8	1.0	0.0	1.0

Source: U.S. Department of Commerce. Bureau of Economic Analysis. Regional Economic Measurement Division. "Average Wage, Wage and Salary Employment, and Total Disbursement Database." December 1987, unpublished. Adapted by the Policy Development and Research Department, Boston Redevelopment Authority.

FIGURE 3 AVERAGE WAGE 1969-86:

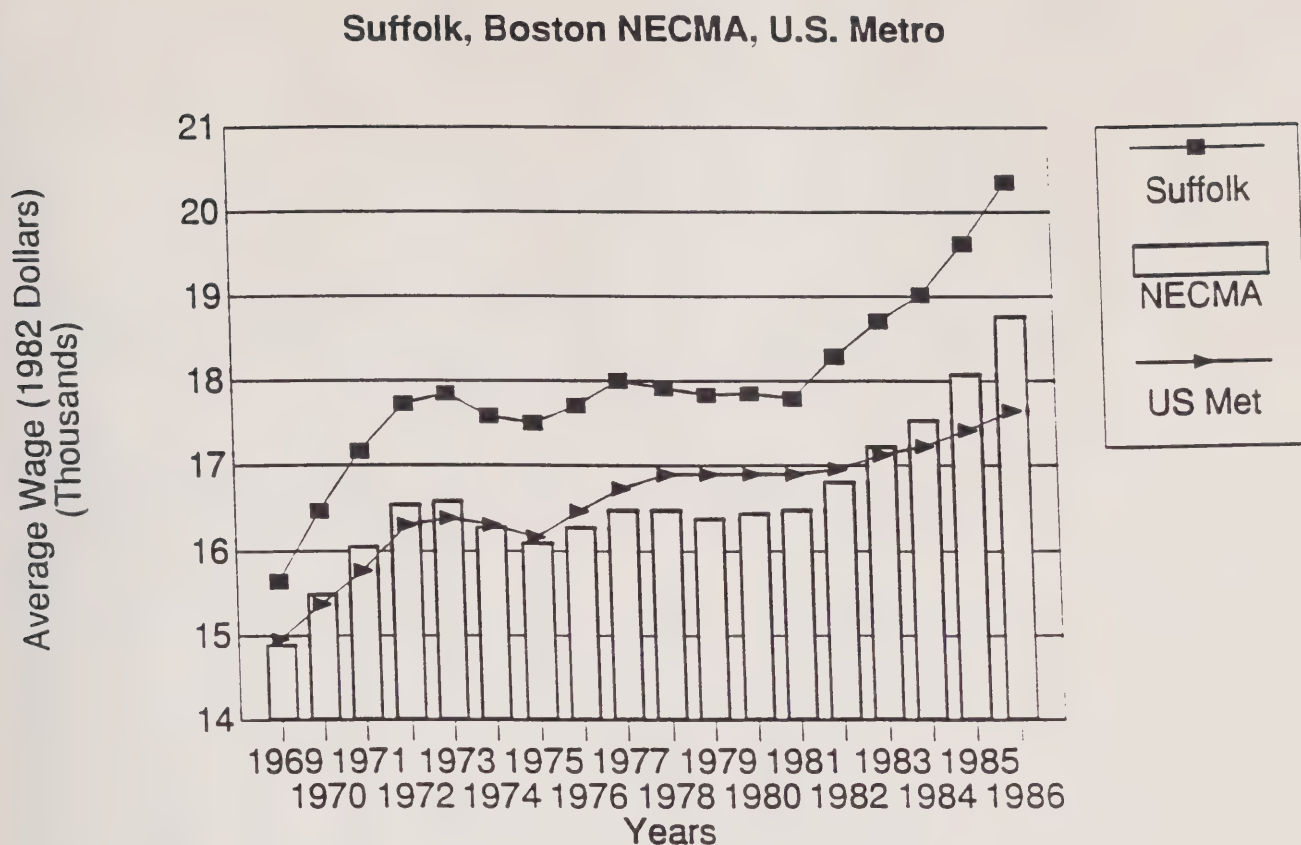


FIGURE 4 ANNUAL GROWTH RATE OF AVERAGE WAGES

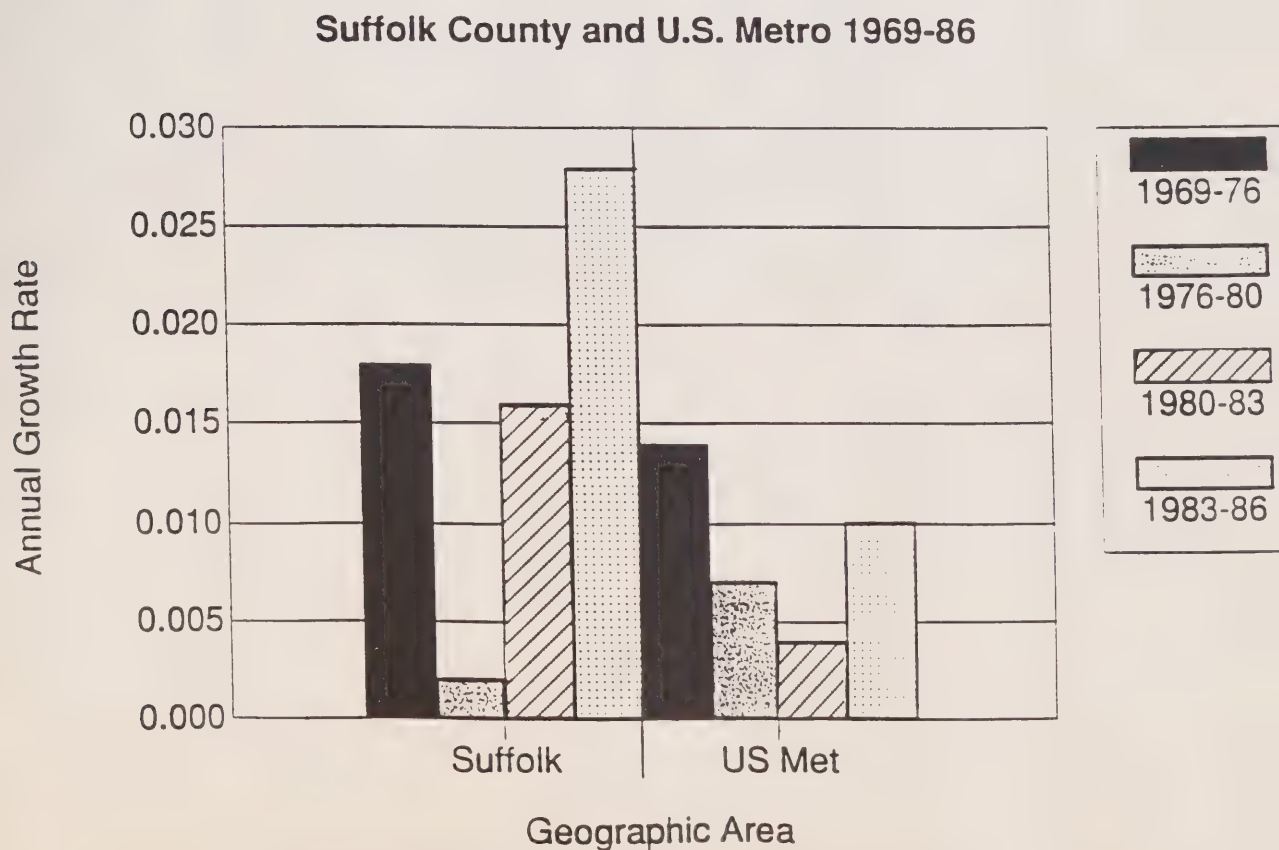


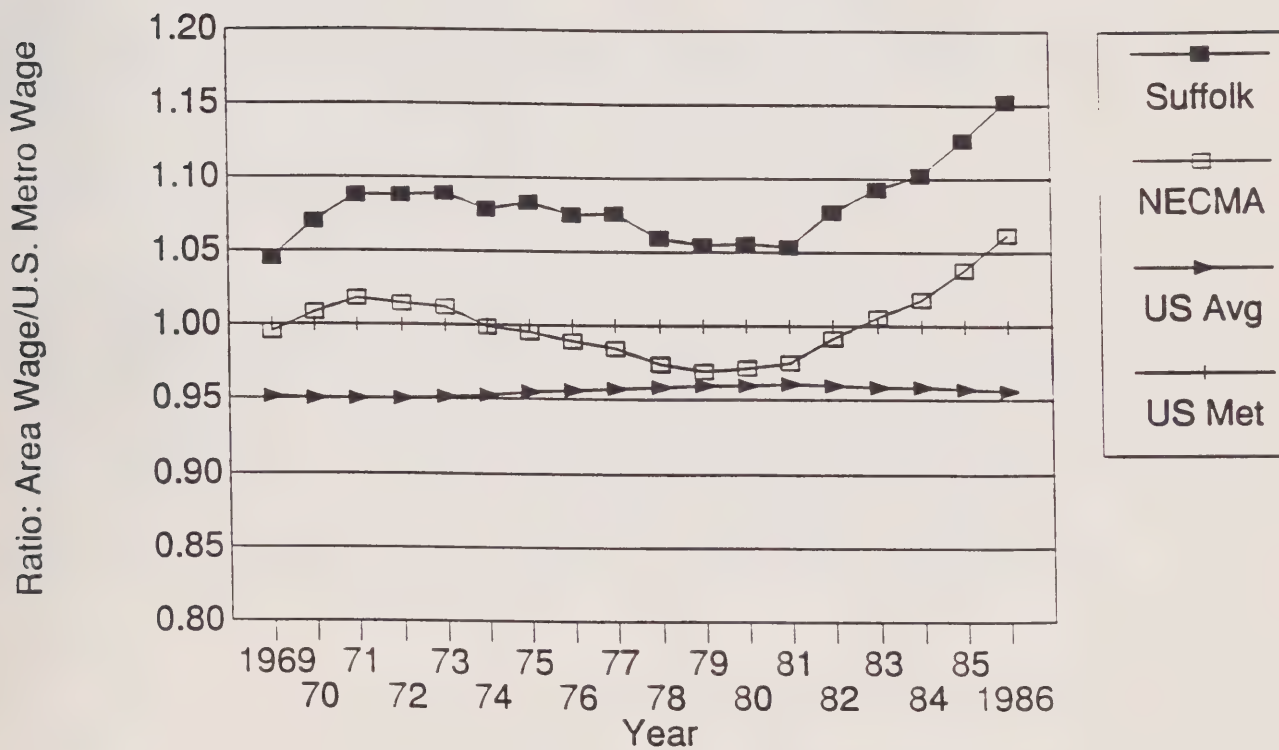
Table 4. Ratio of Average Wage in Suffolk County, Boston Metro, Rest of Massachusetts,
and U.S. to Average Wage in All U.S. Metro Areas, 1969-1986
(U.S. Metro = 1.00)

<u>Year</u>	<u>Suffolk</u>	<u>Boston</u>	<u>Mass.</u>	<u>Mass.</u>	<u>Mass.</u>	<u>U.S.</u>	<u>U.S.</u>	<u>U.S.</u>
	<u>County</u>	<u>NECMA</u>	<u>Metro</u>	<u>Non-Metro</u>	<u>Total</u>	<u>Metro</u>	<u>Non-Metro</u>	<u>Total</u>
1969	1.05	1.00	0.96	0.78	0.96	1.00	0.74	0.95
1970	1.07	1.01	0.97	0.79	0.97	1.00	0.74	0.95
1971	1.09	1.02	0.98	0.78	0.97	1.00	0.74	0.95
1972	1.09	1.02	0.97	0.79	0.97	1.00	0.74	0.95
1973	1.09	1.01	0.97	0.78	0.97	1.00	0.75	0.95
1974	1.08	1.00	0.96	0.77	0.95	1.00	0.76	0.95
1975	1.08	1.00	0.96	0.76	0.95	1.00	0.77	0.96
1976	1.08	0.99	0.95	0.75	0.94	1.00	0.78	0.96
1977	1.08	0.99	0.95	0.75	0.94	1.00	0.78	0.96
1978	1.06	0.97	0.94	0.75	0.93	1.00	0.79	0.96
1979	1.06	0.97	0.93	0.73	0.93	1.00	0.79	0.96
1980	1.06	0.97	0.93	0.72	0.92	1.00	0.79	0.96
1981	1.05	0.98	0.93	0.72	0.93	1.00	0.79	0.96
1982	1.08	0.99	0.95	0.72	0.94	1.00	0.79	0.96
1983	1.09	1.01	0.96	0.72	0.95	1.00	0.78	0.96
1984	1.10	1.02	0.97	0.73	0.96	1.00	0.77	0.96
1985	1.13	1.04	0.98	0.74	0.98	1.00	0.76	0.96
1986	1.15	1.06	1.01	0.77	1.00	1.00	0.75	0.96

Source: U.S. Department of Commerce. Bureau of Economic Analysis. Regional Economic Measurement Division. "Average Wage, Wage and Salary Employment, and Total Disbursement Database." December 1987, unpublished. Adapted by the Policy Development and Research Department, Boston Redevelopment Authority.

FIGURE 5 AREA AVERAGE WAGE TO U.S. METRO 1969-86

For Suffolk, Boston NECMA, US Average



Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Measurement Division, "Average Wage, Wage and Salary Employment, and Total Disbursement Database," December 1987, unpublished. Adapted by the Policy Development and Research Department, Boston Redevelopment Authority.

Wage and Salary Disbursements

The total disbursement of wages and salaries in Suffolk county grew at a 0.4 percent annual rate between 1969 and 1976. See Table 5 and Table 6. This growth rate was lower than the metropolitan national average of 2.7 percent for the same period. In the 1976-80 period, Suffolk's growth rate increased to 2.2 percent and the U.S. metro rate increased to 3.7 percent. However, in the 1980-83 period the disbursement growth rates were 2.0 percent for Suffolk and 0.6 percent for U.S. Metro, indicating that Suffolk maintained a steady growth rate despite a U.S. recession. Between 1983 and 1986, the national disbursement growth rate recovered to 2.2 percent, still slightly below the Suffolk growth rate of 2.4 percent. See Figure 6.

The percentage of the U.S. total disbursement of wages and salaries that was generated in Suffolk county declined from 0.82 percent to 0.63 percent during the 1970-1978 period. For the Boston metropolitan area, excluding Suffolk, the corresponding shares of the U.S. total were 1.42 percent and 1.30 percent. See Table 7 and Figure 7. However, between 1979 and 1986, the Suffolk share of U.S. disbursements increased to 0.69 percent and the Boston metropolitan (excluding Suffolk) share has increased to 1.59 percent. The share of the two combined, the five county metro region, was in 1986 higher than at any other time in the 1970-1986 period. See Figure 7.

Table 5. Total Wage and Salary Disbursement in Suffolk County, Boston Metro, Rest of Massachusetts, and the U.S., 1969-1986
(in millions of constant 1982 dollars)

Year	Suffolk County	Boston NECMA	Mass. Metro	Mass. Non-Metro	Mass. Total	U.S. Metro	U.S. Non-Metro	U.S. Total
1969	9,030	24,806	34,195	723	34,919	960,906	162,270	1,123,175
1970	9,422	25,782	35,314	753	36,067	987,566	167,760	1,155,326
1971	9,592	26,254	35,837	788	36,625	1,010,939	174,416	1,185,355
1972	9,933	27,541	37,610	845	38,455	1,073,644	186,064	1,259,708
1973	9,866	28,351	38,923	897	39,819	1,128,010	197,469	1,325,478
1974	9,651	27,994	38,421	891	39,312	1,139,686	202,781	1,342,467
1975	9,261	26,778	36,533	862	37,395	1,109,190	201,485	1,310,675
1976	9,305	27,265	37,383	907	38,290	1,157,697	216,916	1,374,613
1977	9,517	28,341	38,810	961	39,771	1,217,709	228,082	1,445,791
1978	9,663	29,630	40,564	1,014	41,578	1,291,117	241,781	1,532,898
1979	9,951	30,650	41,758	1,043	42,802	1,333,792	249,353	1,583,145
1980	10,167	31,417	42,368	1,049	43,417	1,339,914	246,830	1,586,744
1981	10,151	31,749	42,477	1,064	43,541	1,351,643	247,253	1,598,896
1982	10,336	32,289	42,824	1,077	43,901	1,339,230	240,223	1,579,453
1983	10,790	33,983	44,753	1,135	45,888	1,363,958	239,694	1,603,652
1984	11,408	36,853	48,362	1,248	49,610	1,442,102	249,008	1,691,110
1985	11,781	38,920	50,936	1,336	52,272	1,500,980	250,971	1,751,951
1986	12,461	41,119	53,804	1,473	55,278	1,553,701	253,206	1,806,907

Source: U.S. Department of Commerce. Bureau of Economic Analysis. Regional Economic Measurement Division. "Average Wage, Wage and Salary Employment, and Total Disbursement Database." December 1987, unpublished. Adapted by the Policy Development and Research Department, Boston Redevelopment Authority.

Table 6. Percentage Change in Total Wage and Salary Disbursement in Suffolk County, Boston Metro, Rest of Massachusetts, and the U.S., 1969-1986

Period	Suffolk County	Boston NECMA	Mass. Metro	Mass. Non-Metro	Mass. Total	U.S. Metro	U.S. Non-Metro	U.S. Total
1969-76	0.4%	1.4%	1.3%	3.3%	1.3%	2.7%	4.2%	2.9%
1976-80	2.2%	3.6%	3.2%	3.7%	3.2%	3.7%	3.3%	3.7%
1980-83	2.0%	2.7%	1.8%	2.7%	1.9%	0.6%	-1.0%	0.4%
1983-86	2.4%	3.2%	3.1%	4.4%	3.2%	2.2%	0.9%	2.0%

Source: U.S. Department of Commerce. Bureau of Economic Analysis. Regional Economic Measurement Division. "Average Wage, Wage and Salary Employment, and Total Disbursement Database." December 1987, unpublished. Adapted by the Policy Development and Research Department, Boston Redevelopment Authority.

FIGURE 6 ANNUAL GROWTH RATE OF DISBURSEMENTS 69-86:

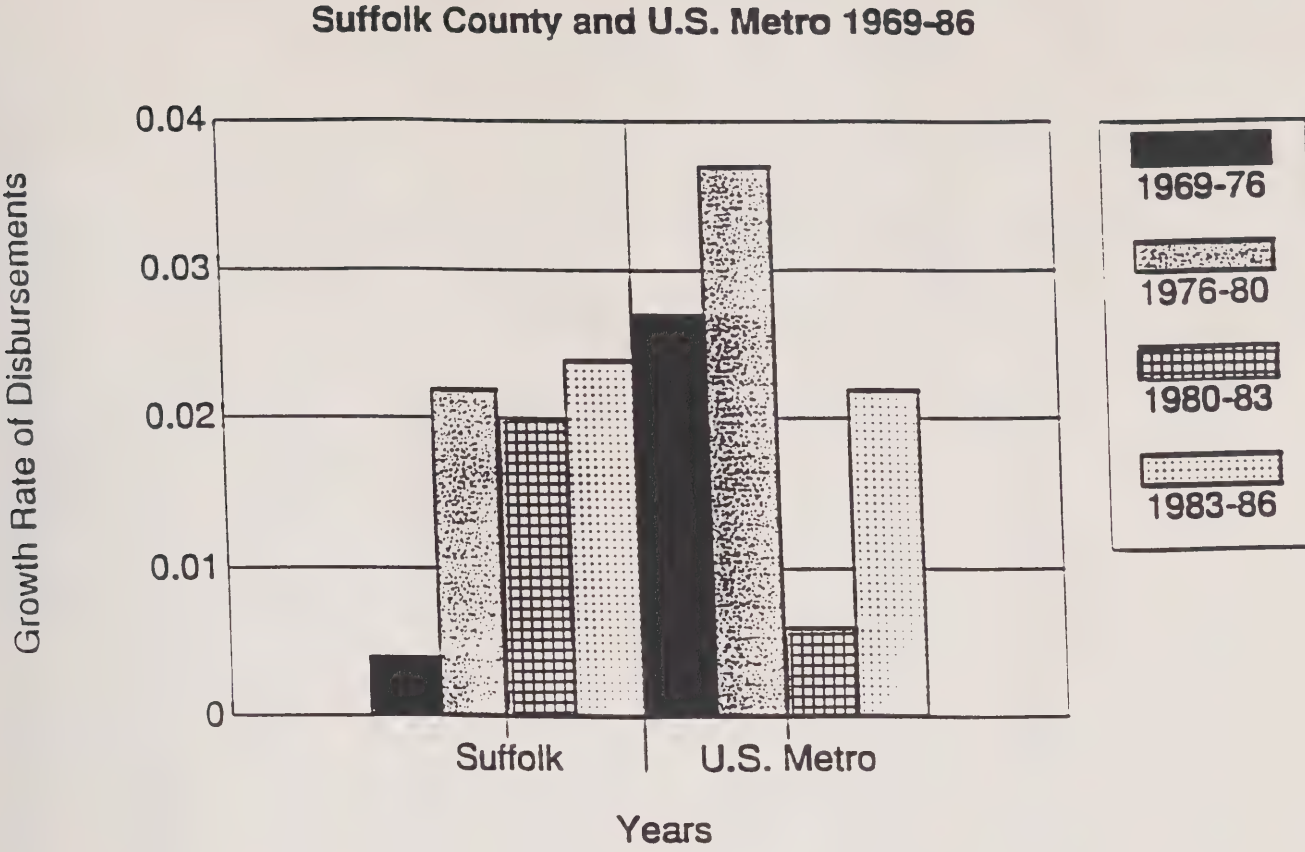
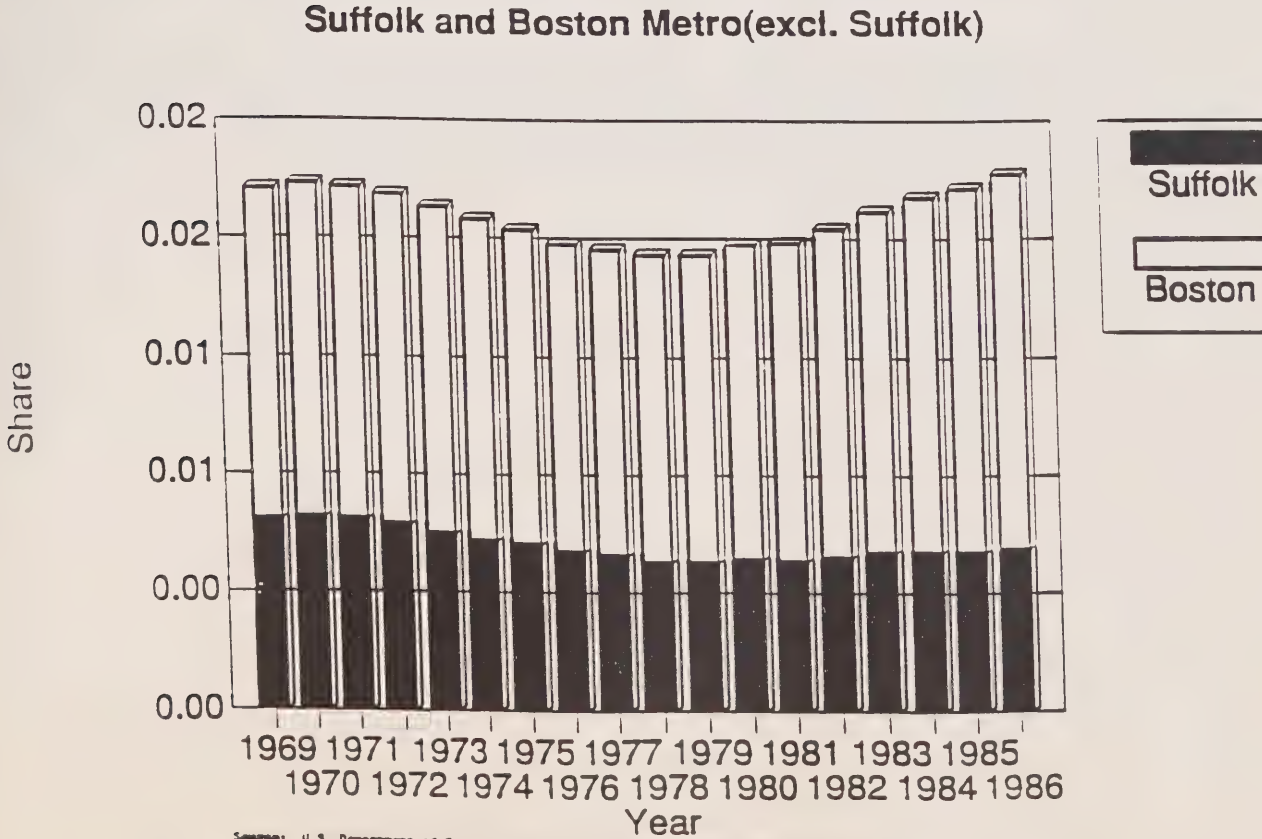


FIGURE 7 SHARE OF U.S. WAGE DISBURSEMENTS 69-86:



Sources: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Measurement Division, "Average Wage, Wage and Salary Employment, and Total Disbursements Database," December 1987.

Table 7. Area Wage Disbursements as a Percent of Total Disbursements in U.S., 1969-1986
(in percent)

Year	Suffolk <u>County</u>	Boston <u>NECMA</u>	Mass. <u>Metro</u>	Mass. <u>Non-Metro</u>	Mass. <u>Total</u>	U.S. <u>Metro</u>	U.S. <u>Non-Metro</u>	U.S. <u>Total</u>
1969	0.80	1.40	3.04	0.06	3.11	85.55	14.45	100
1970	0.82	1.42	3.06	0.07	3.12	85.48	14.52	100
1971	0.81	1.41	3.02	0.07	3.09	85.29	14.71	100
1972	0.79	1.40	2.99	0.07	3.05	85.23	14.77	100
1973	0.74	1.39	2.94	0.07	3.00	85.10	14.90	100
1974	0.72	1.37	2.86	0.07	2.93	84.89	15.11	100
1975	0.71	1.34	2.79	0.07	2.85	84.63	15.37	100
1976	0.68	1.31	2.72	0.07	2.79	84.22	15.78	100
1977	0.66	1.30	2.68	0.07	2.75	84.22	15.78	100
1978	0.63	1.30	2.65	0.07	2.71	84.23	15.77	100
1979	0.63	1.31	2.64	0.07	2.70	84.25	15.75	100
1980	0.64	1.34	2.67	0.07	2.74	84.44	15.56	100
1981	0.63	1.35	2.66	0.07	2.72	84.54	15.46	100
1982	0.65	1.39	2.71	0.07	2.78	84.79	15.21	100
1983	0.67	1.45	2.79	0.07	2.86	85.05	14.95	100
1984	0.67	1.50	2.86	0.07	2.93	85.28	14.72	100
1985	0.67	1.55	2.91	0.08	2.98	85.67	14.33	100
1986	0.69	1.59	2.98	0.08	3.06	85.99	14.01	100

Source: U.S. Department of Commerce. Bureau of Economic Analysis. Regional Economic Measurement Division.
"Average Wage, Wage and Salary Employment, and Total Disbursement Database." December 1987, unpublished.
Adapted by the Policy Development and Research Department, Boston Redevelopment Authority.

